

## **Population Growth and the Development of Capitalism in England, 1550-1850.**

In 1965, H.J. Habakkuk presented a 'heroically simplified version of English economic history':

'long-term movements in prices, in income distribution ... in real wages ... are dominated by changes in the growth of population. Rising population: rising prices ... low real incomes for the mass of the population ... this might stand for a description of the thirteenth century, the sixteenth century, and the early seventeenth, and the period 1750-1815. Falling or stationary population with ... higher mass incomes might be said to be characteristic of the intervening periods.'<sup>1</sup>

This statement represents a form of demographic determinism, which is confirmed by the evidence presented in this paper. It assumes that population growth was independent of economic development, an assumption challenged by the Cambridge Group, who argued that population increase was largely fuelled by economic development, with a growth of real wages leading to a reduction in the age of marriage and an increase in fertility.<sup>2</sup>

The assumption that real incomes rose during the eighteenth century is open to doubt, given that there was a marked increase in poverty amongst labourers and other impoverished groups at the end of the eighteenth century and first half of the nineteenth. Attempts have been made by economic historians to resolve different conclusions by adopting mathematical models, but these have resulted in significantly different answers.

For example, there is fundamental disagreement between Gregory Clark on the one hand, and Stephen Broadberry and colleagues on the other about long-term growth in England in the period between the fifteenth and early nineteenth century. The former concluded that there was no significant change in per capita incomes in this period, whereas Broadberry et.al. have concluded that GDP per head approximately doubled in the same period.<sup>3</sup> The different conclusions are the result of disagreements on estimates of population, the impact of technology, employment levels, the incomes of women and children, changing occupational structure, and the effect of enclosures on the demand for labour.

The problem is that there is no reliable national evidence to evaluate competing ideas and attempts to resolve these difficulties have led to the use of models which necessarily require a range of unreliable assumptions. As E.P. Thompson argued, the lack of reliable national evidence has bedevilled the long standard of living debate, which is unlikely to ever be resolved by econometric analysis.<sup>4</sup>

In his study of income and wealth inequalities, Thomas Piketty has written that

For far too long economists have sought to define themselves in terms of their supposedly scientific method. In fact, those methods rely on an immoderate use of mathematical methods ... the new

methods often lead to a neglect of history and the fact that historical experience remains our principle source of knowledge.<sup>5</sup>

One of the major problems with assessing real incomes is the prevalence of unemployment. Henry Mayhew in his study of London's poor concluded that 'in the generality of trades the calculation is that one third of the hands are fully employed, one third partially, and one third unemployed throughout the year.'<sup>6</sup>



There were rises and falls in infant mortality in both elite and control families, although the timing was slightly different in the two groups. Overall, child mortality was lower amongst the elite population, possibly as a result of better hygienic and child-rearing practices. There were, however, rises and a slight fall in child mortality in control families in the period between 1600-49 and 1800-49.

A similar study was carried out on 115 Bedfordshire parishes, revealing the following pattern.

**Table 5: Estimated Infant and Child Mortality (1-4) Rates (Per 1000) Amongst Elite and Control Families in 115 Bedfordshire Parishes, 1600-1849.<sup>12</sup>**

<i>Period</i>	<i>Elite Families</i>		<i>Control Families</i>	
	IMR	CMR	IMR	CMR
1600-49	98	90	144	66
1650-99	147	99	166	164
1700-49	239	53	195	139
1750-99	136	49	185	245
1800-49	86	50	99	101

The pattern is similar to that in Table 4, with mortality rising and falling in the long period between the early seventeenth and middle of the nineteenth centuries, but with slight variations. One of the most significant findings was the much lower child mortality in elite families from the seventeenth century.

Some of the mortality shifts may have been the result of the increasing virulence of smallpox. For example, under five per cent of young children appear to have died of the disease in London during the sixteenth century, whereas by the end of the nineteenth century this increased to forty-five percent among the unvaccinated.<sup>13</sup> The wealthy practised inoculation and vaccination at an earlier date than the general population, possibly accounting for some of the variations in child mortality patterns.<sup>14</sup>

Adult mortality fell amongst all socio-economic groups, including the wealthy.<sup>15</sup> This suggests that wealth was not an important factor in the reduction in mortality. For example, the mean number of years lived by Members of Parliament during the period 1660-1820 was as follows:

<sup>12</sup> Razzell, *Population*, p. 133.

<sup>13</sup> See P.E. Razzell, *The Conquest of Smallpox*, 2003, pp. 169-180; P.E. Razzell, The geography of smallpox in England before vaccination: a conundrum compounded, *Academia Online*, pp. 6-8. McVail in his extensive review of the fatality of smallpox, concluded that 'natural smallpox gradually became throughout the eighteenth century, and up to the epidemic of 1870-73, a more virulent and fatal disease, its maximum fatality being on a large basis of facts 45 per cent.' See *Ibid*, p.169.

<sup>14</sup> *Ibid*.

<sup>15</sup> Razzell, *Population*, pp. 107, 116, 199, 204.

**Table 6: Mean Number of Years Lived by Members of Parliament, 1660-1820 (Number of Cases in Brackets).<sup>16</sup>**

<i>Period of First Entry</i>	<i>Age at First Entry</i>		
	<i>29 Years and Under</i>	<i>30-39 Years</i>	<i>40 Years Plus</i>
1660-1690	25.7 (429)	22.6 (458)	17.9 (633)

What was the role of fertility in the demographic transition in the early modern period? Malthus argued theoretically that population had grown in the eighteenth century largely as a result of increasing fertility. However, he qualified this conclusion by noting that in England ‘the more rapid increase of population, supposed to have taken place since the year 1780, has arisen more from the diminution of deaths than the increase of births.’<sup>24</sup> He went on to conclude that

The gradual diminution and almost total extinction of the plagues which so frequently visited Europe, in the seventeenth and the beginning of the eighteenth centuries, produced a change [in the incidence of marriage] ... in this country [England] it is not to be doubted that the proportion of marriages has become smaller since the improvement of our towns, the less frequent return of epidemics, and the adoption of habits of greater cleanliness.’<sup>25</sup>

This was an early form of demographic transition theory, and in order to evaluate this argument, it is necessary to examine the history of English nuptiality in the early modern period. The Cambridge Group argued that fertility had grown during the eighteenth century as a result of falling mean ages of marriage, linked to an increasing standard of living. They found a decline of about two-and-a-half years in the average age of marriage of spinsters in the eighteenth century.<sup>26</sup> This finding is somewhat contradicted by data from marriage licences, which indicate that average age of marriage rose by about a year in this period.<sup>27</sup> The marriage licence data covered a somewhat wealthier population than the general population, and there is evidence of different trajectories in marriage patterns between the two populations.<sup>28</sup>

According to marriage licences in Nottinghamshire and Gloucestershire during the



**Table 10: Estimated Under-Registration of Births and Deaths in England, 1538-1837.<sup>35</sup>**

<i>Period</i>	<i>Proportion of Births Not Registered (%)</i>	<i>Proportion of Deaths Not Registered (%)</i>
1538-1599	39	34
1600-1649	36	31
1650-1699	30	27
1700-1749	21	22
1750-1799	32	27
1800-1837	30	23

The figures in Table 10 significantly vary from the Cambridge Group's estimates of under-registration, particularly in the sixteenth and seventeenth centuries. However, they do reveal that birth registration deteriorated in the second half of the eighteenth century, assumed by the Cambridge Group. Applying the figures in Table 10 to the Group's estimates of baptism and burial rates,<sup>36</sup> yields the following data for the eighteenth and early nineteenth centuries.

**Table 11: Estimated Birth and Death Rates in England, 1701-1820.**

<i>Period</i>	<i>Estimated Birth Rate Per 1000</i>	<i>Estimated Death Rate Per 1000</i>
1701-1740	35.5	34.6
1741-1780	39.3	31.4
1781-1820	38.8	24.7

Table 11 reveals an increase in the birth rate of the order of three years, whereas the death rates fell by about ten years. The age structure of the English population appears not to have significantly changed between the early eighteenth and nineteenth centuries,<sup>37</sup> suggesting that the rise in fertility played a relatively minor role in population growth compared to the reduction of mortality.

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John Lovell made the following argument about the importance of Ireland's economic and demographic history:

'if population growth was caused by factors independent of the economy ... then it becomes possible to regard the industrialization process as one that was vitally necessary for the welfare of the mass of the population, for if there had been no rapid expansion of economic activity ... then the growth of numbers would ultimately have produced a crisis of subsistence. Such a crisis of subsistence did in

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<sup>35</sup> For death under-registration see Razzell, *Population*, p. 15. The figures for birth under-registration are based on research published in 'The measurement of the reliability of parish registration through same-name methodology', *Academia Online*.

<sup>36</sup> See Razzell, *Population*, p. 47.

<sup>37</sup> Razzell, *Population*, p. 47.



fact occur in one part of the British Isles where the growth of population was not matched by that of industry. This was in Ireland, where the pressure of population resulted in small famines in 1817-18 and 1822 and a catastrophic famine in 1846.<sup>38</sup>

Ireland's population history reveals a new perspective on the debate about Britain's demographic and economic history. There is however little historical demographic data for Ireland, except for that on Irish Quakers. The following Table summarizes an analysis of reconstitution schedules, using same name correction ratios.<sup>39</sup>

**Table 12: Estimated Quaker Infant Mortality (Per 1000) in England and Ireland, 1650-99.**

<i>Place</i>	<i>Infants At Risk</i>	<i>Infant Deaths</i>
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surplus of labour, resulting in the growing pauperisation of the poor. Pauperisation led to demoralisation, as described by Malthus, resulting in early marriage and the growth of fertility. The Irish Poor Inquiry Commission was told by a Catholic curate from Mayo that ‘small holders are induced to marry by feeling that their condition cannot be made worse, or, rather they know that they can lose nothing, and they promise themselves some pleasure in the society of a wife.’<sup>46</sup> Likewise, ‘from Kilkenny – as indeed, from most other counties – there came almost the same story: labourers get married under the idea they cannot make their condition worse than it is.’<sup>47</sup>

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Jane Whittle has summarized the impact of population on the development of capitalism in the medieval period:

Fluctuations in population levels have been used to explain some of the most important trends in medieval and early modern history, trends with vital importance to the development of capitalism ... Manorial lords had retained their hold on the economy in the century before the Black Death because of the high demand for land. Once this factor was removed by population decline, the diversified economy undermined the manorial lord’s position ... Peasants, or rather wealthy peasants, had capitalized on the fifteenth century situation, building up their land holdings, and orientating themselves increasingly towards market production ... Additionally ... there was no shortage of labour in the sixteenth century [for the growth of capitalism].<sup>48</sup>

At a later date Lawrence Stone noted a process of social polarisation that had taken place in England during the sixteenth century as a result of population growth:

The excess supply of labour relative to demand not only increased unemployment but forced down real wages to an alarming degree ... [there was] a polarisation of society into rich and poor: the upper classes became relatively more numerous, and their real incomes rose; the poor also became more numerous and their real incomes fell.’<sup>49</sup>

According to Phelps Brown and Hopkins in their study of builders’ real wages during the period 1264-1954, ‘the lowest point we record in seven centuries was in 1597, the year of *Midsummer Night’s Dream*.’<sup>50</sup> This is also what occurred in Shakespeare’s Stratford during the same period. Although there is no evidence on the population history of Stratford, there is for







lives are spent, in the majority of cases. In constant oscillation between their homes and the workhouse, with no alternative beyond starvation or the gaol.<sup>73</sup>

Mayhew discussed the sweating system as a part of his analysis of poverty in London. At its worst could be highly dangerous to health and life, as was revealed by someone who had worked for one:

One sweater I worked with had four children, six men, and they, together with his wife, sister-in-law, and himself lived in two rooms, the largest of which was about eight feet by ten. We worked in the smallest room and slept there as well – all six of us. There were two turn-up beds in it, and we slept three in a bed. There was no chimney, and indeed no ventilation whatever. I was near losing my life there. Almost all the men were consumptive, and I myself attended the dispensary for disease of the lungs.<sup>74</sup>

Charles Shaw in his autobiography described the conditions of workers in the Staffordshire Potteries in the 1830s and 1840s:

All the great events of the town took place ... [in] the marketplace. During the severity of winter I have seen one of its sides nearly filled with stacked coals. The other side was stacked with loaves of bread, and such bread. I feel the taste of it even yet, as if made of ground straw, and alum, and Plaster of Paris. These things were stacked there by the parish authorities to relieve the destitution of the poor. Destitution, for the many, was a chronic condition in those days, but when winter came in with its stoppage of work, this destitution became acute, and special measures had to be taken to relieve it.

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forestallers of grain themselves.<sup>85</sup> In England, the lack of a central authority supported